

PROJECT DESCRIPTION

EQUIPMENT LIST (CONT.)

I. GENERAL

This project involves the modification of an existing Traffic Control Signal with interconnect at the intersection of MD 189 (Falls Rd) and Democracy Blvd / South Glen Rd in Montgomery County. Countdown pedestrian signal heads with audible pushbuttons shall be installed across the east leg of this intersection as a result of the construction of a bike path. MD 189 (Falls Rd) is assumed to run a north-south direction.

II. INTERSECTION OPERATION

- The intersection shall continue to operate in a NEMA seven-phase, semi-actuated mode, with the MD 189 (Falls Rd) approaches running concurrently. The Exclusive/Permissive left turn phases for both approaches of MD 189 (Falls Rd) shall remain in operation. A new Countdown pedestrian phase on recall with audible pushbuttons shall be provided across the east leg of Democracy Blvd. The Exclusive/Permissive left turn phase for the westbound approach of Democracy Blvd shall remain in operation. The Democracy Blvd / South Glen Rd approaches shall also continue to run concurrently.
- The existing full-traffic-actuated, eight-phase controller with L.A.U. and L.A.U. Panel and all necessary equipment housed in a NEMA size "6" base-mounted cabinet shall be installed at this intersection.
- Montgomery County signal shop shall instal APS control unit into controller cabinet. The Contractor shall deliver the Control Unit and audible pushbuttons to the Montgomery County Signal Shop for testing and programming.

III. SPECIAL NOTES

- The Contractor shall be responsible for terminating all signal cables, to the appropriate terminals and shall properly label each cable.
- The contractor shall run the interconnect cable into the base of each cabinet and properly tag the cable. All controller cabinet wiring will be performed by Montgomery County Forces. Contact Kamal Hamud at (240) 777-8761 seventy-two hours in advance of intended work.
- All underground and overhead utilities shown on these plans are schematic only and may not be complete. The Contractor shall be responsible for notifying Miss Utility prior to construction so that all utilities may be located in the field. If the Contractor perceives that a conflict between the utilities and the traffic signal will occur, the Contractor shall notify the Project Engineer immediately so that the conflict may be resolved.
- APS will function as follows:  
TO CROSS DEMOCRACY BLVD
  - When pedestrian locates and presses pushbutton for an extended time, the pushbutton unit will be "Wait to cross Democracy at Falls, crosswalk angles slightly left."
  - When WALK phase begins, the message will be a rapid tick which will last for the duration of the WALK phase.

The contact persons for District #3 (Montgomery County) are as follows:

Mr. Brian Young  
Assistant District Engineer - Traffic  
Phone: (301) 513-7318

Mr. Vernon Stinnett  
Assistant District Engineer - Maintenance  
Phone: (301) 513-7304

Mr. Augie Rebish  
Assistant District Engineer - Utility  
Phone: (301) 513-7350

Mr. Richard L. Daff, Sr.  
Chief, Traffic Operations Division  
Phone: (410) 787-7630

Mr. Ed Rodenhizer  
Manager, Signal Operations Section  
410-787-7652

Sonny Bailey  
Manager, Sign Shop Operations  
410-787-7676

EQUIPMENT LIST

A. EQUIPMENT TO BE SUPPLIED BY MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION AND INSTALLED BY THE CONTRACTOR.

ITEM NO.	DESCRIPTION	QUANTITY
8088	D3-2 "Democracy BLVD (arrow) / (arrow) Democracy BLVD" sign (variable x 18") span wire mounted.	1 Each
8088	R9-5(mod) "Bike (symbol) USE / PED SIGNAL" sign, (12" x 18") ground mounted with hardware.	2 Each
8088	R1-2 (mod) "YIELD / TO BIKES/PEDS IN CROSSWALK", sign (30"x40") ground mounted.	2 Each
8126	Pedestrian pushbutton and pedestrian education R10-3(1) sign. (Note: Sign to read "PUSH BUTTON TO CROSS DEMOCRACY BLVD")	2 Each
8126	Pedestrian pushbutton and pedestrian education R10-3(1) sign. (Note: Sign to read "PUSH BUTTON TO CROSS FALLS ROAD")	Each

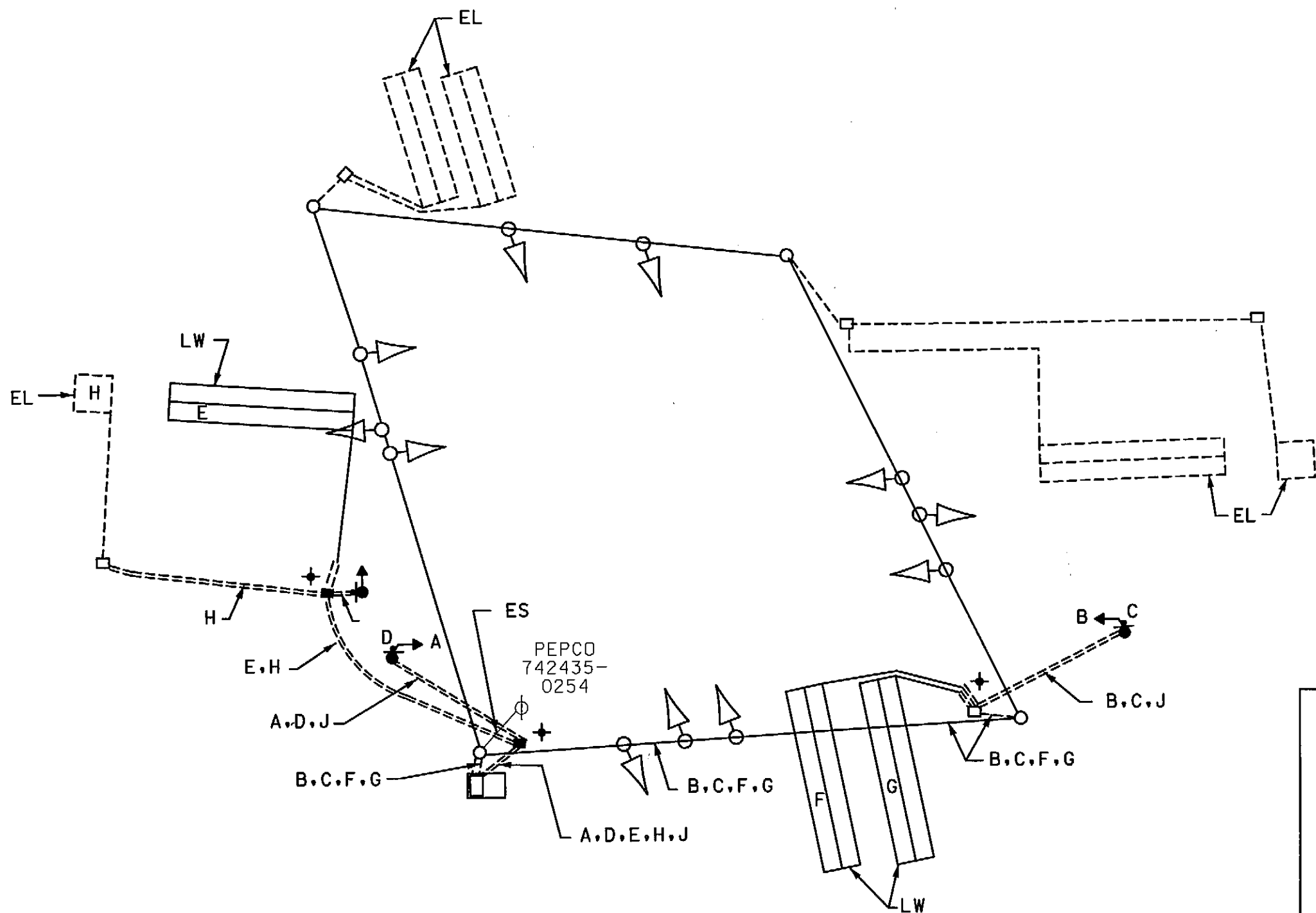
B. EQUIPMENT TO BE FURNISHED AND INSTALLED BY THE CONTRACTOR.

ITEM NO.	DESCRIPTION	QUANTITY
1001	Maintenance of Traffic	1 Day
2002	Test pit excavation.	3 C.Y.
8001	Concrete foundation.	2.1 C.Y.
8023	3" polyvinyl chloride electrical conduit (Schedule 80) (trenched).	255 L.F.
8027	4" polyvinyl chloride electrical conduit (Schedule 80) (trenched).	15 L.F.
8031	1" liquid tight flexible non metallic conduit (detector wire sleeve).	20 L.F.
8060	Loop wire (No. 14 A.W.G.) encased in 1/4" flexible tubing.	1400 L.F.
8063	Canoga 4-conductor electrical cable (No. 14 A.W.G.) (shielded).	565 L.F.
8064	2-conductor electrical cable (No. 14 A.W.G.).	575 L.F.
8066	5-conductor electrical cable (No. 14 A.W.G.).	595 L.F.
8075	1-conductor electrical cable (No. 6 A.W.G.) stranded bare copper ground wire.	70 L.F.
8136	Traffic signal handbox (pullbox).	2 Each
8137	Sawcut.	365 L.F.
8153	Removal and salvage of signs less than 50 S.F.	4 Each
8166	Removal of handbox.	1 Each
Neg.	Remove existing pavement markings.	30 L.F.
Neg.	5" white permanent thermoplastic pavement marking.	15 L.F.
Neg.	5" yellow permanent thermoplastic pavement marking.	30 L.F.
Neg.	12" white heat applied permanent preformed thermoplastic pavement marking.	350 L.F.
Neg.	24" white heat applied permanent preformed thermoplastic pavement marking.	70 L.F.
Neg.	10' breakaway pedestal pole with transformer base.	2 EA
Neg.	Furnish and install 16" LED Countdown pedestrian signal head.	4 Each
	Tubular steel post.	2 EA
	2 wire Central Control unit	1 EA
	Audible/tactile pedestrian pushbutton station & signs.	4 EA

PHASE CHART

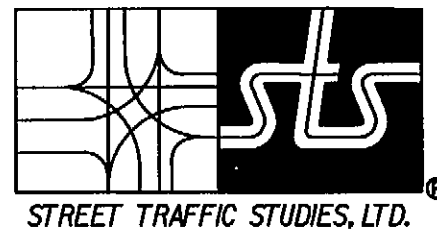
	1	2	3	4	5	6	7	8	9	10	11	12	13
PHASE 1 & 5	←G-/R	←G-/R	R	←G-/R	←G-/R	R	R	R	R	R	R	DW	DW
CHANGES TO PHASES 1 & 6, 2 & 5 OR 2 & 6													
PHASE 1 & 6	←G-/G	←G-/G	G	R	R	R	R	R	R	R	R	WK	WK
1 & 6 CHANGE	←Y-/G	←Y-/G	G	R	R	R	R	R	R	R	R	WK	WK
PHASE 2 & 5	R	R	R	←G-/G	←G-/G	G	R	R	R	R	R	DW	DW
2 & 5 CHANGE	R	R	R	←Y-/G	←Y-/G	G	R	R	R	R	R	DW	DW
PHASE 2 & 6	G	G	G	G	G	G	R	R	R	R	R	WK	WK
PED CLEAR / COUNTDOWN	G	G	G	G	G	G	R	R	R	R	R	FL/DW	FL/DW
2 & 6 CHANGE	Y	Y	Y	Y	Y	Y	R	R	R	R	R	DW	DW
PHASE 3 & 8	R	R	R	R	R	R	R	R	←G-/G	←G-/G	G	DW	DW
3 & 8 CHANGE	R	R	R	R	R	R	R	R	←Y-/G	←Y-/G	G	DW	DW
PHASE 4 & 8	R	R	R	R	R	R	G	G	G	G	G	DW	DW
4 & 8 CHANGE	R	R	R	R	R	R	Y	Y	Y	Y	Y	DW	DW
FLASHING OPERATION	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/R	FL/R	FL/R	FL/R	FL/R	DARK	DARK

WIRING DIAGRAM



WIRING KEY

- A) 5-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
- B) 2-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
- C) 4-CONDUCTOR CANOGA CABLE (NO. 14 A.W.G.) ALUMINUM SHIELDED
- J - STRANDED BARE COPPER GROUND WIRE (NO. 6 A.W.G.)
- EL-LOOP WIRE (NO. 14 A.W.G.) EXISTING
- LW-LOOP WIRE (NO. 14 A.W.G.)
- ES-EXISTING OVERHEAD SERVICE TO BE MAINTAINED BY PEPCO
- GR-GROUND ROD



STREET TRAFFIC STUDIES, LTD.  
400 Craft Hwy., NW  
Glen Burnie, MD 21061  
Ph (410) 590-5500  
Fax (410) 590-6637

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FILE: \$FILE\$

STATE OF MARYLAND  
DEPARTMENT OF TRANSPORTATION  
STATE HIGHWAY ADMINISTRATION

MD 189 (FALLS RD) AND  
DEMOCRACY BLVD / SOUTH GLEN RD  
POTOMAC, MARYLAND

GENERAL INFORMATION SHEET

SCALE NONE DATE 11/30/09 CONTRACT NO.

DESIGNED BY R.R.Z. COUNTY MONTGOMERY  
DRAWN BY R.C. LOGMILE 15018902.66  
CHECKED BY R.C. TIMS NO. 1807  
F.A.P. NO. TOD NO.

TS NO.3878D DRAWING NO. 2 OF 2 SHEET NO. OF